

# **RAB Minutes**

NAS North Island

Restoration Advisory Board

## **Introduction**

The forty-second Restoration Advisory Board (RAB) meeting for Naval Air Station (NAS) North Island was held on Thursday, January 15, 1998, at the Coronado Public Library from 6:30 p.m. to 8:30 p.m.

Mr. Mike Magee, substituting for Arno Bernardo, Navy Co-Chair, called the meeting to order at 6:35 p.m. and welcomed RAB and community members.

RAB Attendance: Rafat Abbasi, Wayne Crawford, Richard Dittbenner, Lois Ewen, Laura Hunter, Sandor Kaupp, Richard Mach, Dottie Marron, Larry McCauley, Marsha Mingay, Art Van Rooy

Public/Navy Attendance: Matt Anderson, Rick Basinet, Mark Bonsavage, Earl Callahan, Neal Clements, Bill Collins, David DeMars, Beverly Dyer, Lou Dyer, Marilyn Field, John Hinkley, Marcie Innes, Carol Jahnkow, Paul Katen, Jim Kozakowski, Mike Magee, Vivian Mayer, Ray Mello, David Merk, Ken Moser, Grace Penafuerte, Rick Phillips, Michael Pound, Rey Ringor, Shirley Rivera, Brian Sanders, Jan Sciortino, Rob Sears, Leticia Walters, Joy Williams

**APPROVAL OF MEETING MINUTES FROM OCTOBER 30, 1997, MEETING:** Mr. Crawford moved, and Ms. Hunter seconded approval of the October 30, 1997, RAB minutes as written. Ms. Hunter then requested that, given the number of new attendees, each person introduce himself or herself.

## **COMMUNITY CO-CHAIR NOMINATION AND ELECTION - Mike Magee**

Mr. Magee explained that the Community Co-Chair position is for a one-year term. Although this is usually done at the December RAB meeting, there was no December meeting. At the October 30, 1997, meeting, Ms. Marron was nominated. There were no other nominations, and Ms. Marron was elected by acclamation.

## **RAB OUTREACH - Mike Magee**

Given the consolidation of the Naval Amphibious Base (NAB) Coronado with NAS North Island, Rey Ringor would give a presentation on the plans for community outreach. Mr. Ringor told the RAB that the fact sheets would be updated. New membership applications will be sent to Coronado residents, NAB and NAS North Island retired personnel, public interest groups, planning groups, government regulators, the Port District, City of Coronado representatives and individuals with technical experience in the environmental field. In addition, flyers will be available in restaurants, Coronado City Hall, and public gathering areas. There will be a press release by the Public Affairs Office (PAO) and announcements will be placed in the Coronado newspapers (the Eagle and the Journal) as well as a mass e-mail to the staff at NAB and NAS North Island. Ms. Marron asked if the mailing would be sent to all residents of Coronado. Mr. Magee replied that the plan was to place

applications inside the fact sheets placed in various locations and that the posted bulletins would ask people to contact the PAO who will then mail or fax out applications. Ms. Hunter suggested that there are several lists other than those of base workers that the announcements can be sent to. She also stated that the terminology used in the flyer should be understandable to those who are not familiar with military terminology. Ms. Mingay suggested forming a subcommittee to help the Navy design the fact sheet. Mr. Dittbenner and Ms. Marron volunteered for it. Ms. Field inquired whether there was a limit to the number of RAB members. Mr. Magee replied that a workable size is between 20 and 30 regular RAB members. Mr. Mach thought the RAB now has 15 members. Ms. Mingay suggested we have the RAB composition match the larger community, and Mr. Collins concurred. Mr. Dittbenner suggested contacting the organizations listed at the beginning of the yellow pages and asking them to pass the information on to their membership. Ms. Field added that past membership solicitations gave the impression that technical expertise was required, and that it should be made clear that interested community members are welcome.

#### RABTAC PRESENTATION - HEALTH RISK ASSESSMENT ON SITES 9 & 11 - Rob Sears

**Background:** Mr. Magee described the process leading up to the four contracts being awarded. The RAB Technical Assistance Program (TAC) is a Department of Defense program with a goal of enabling RABs to get technical assistance evaluating the cleanup reports. The NAS North Island RAB began the process last March and is a pilot program. Four technical assistance contracts were awarded at the end of the last fiscal year, in September 1997. A subcommittee presented four topics that required technical assistance and the Navy assisted in the contract solicitation, application reviews, and contracts awards. Mr. Magee then introduced Mr. Rob Sears, the Health Risk Assessment [HRA] consultant.

Mr. Sears told the RAB that he is an Air Quality Consultant, whose office is in Ojai. He received a degree in atmospheric science from UC Davis in 1978, and has been doing air quality exposure analyses ever since. He spent 9 years with the Santa Barbara County Air Pollution Control District, as Air Toxics Program Coordinator. He also did exposure analyses regarding offshore oil and gas exploration and production. He went into consulting after that, and has been a self-employed Air Quality Consultant for the last 6 years, working primarily with regulatory agencies and litigation support.

In response to Mr. Sear's query, about half of the RAB had read the report he prepared on Sites 9 and 11. Mr. Collins said that he only distributed 5 copies, to each member of the RABTAC subcommittee. Others who read the report were Navy personnel and those who picked up a copy this evening. Mr. Sears said he would cover the report in his verbal presentation.

For the past 30 years or so, air pollution has been regulated in California. The focus was on only 6 pollutants, known as "criteria air pollutants" (so-called because the Federal government developed criteria for ambient air quality standards for those compounds). These are ozones, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter and fine particulate matter in lead. About 10 years ago the focus shifted to non-criteria air pollutants, or air toxics. These cover everything but those 6 air pollutants. The air toxic pollutants are grouped into two broad categories, namely, cancer risks and non-cancer health effects. Non-cancer health effects include those on the respiratory system, reproductive system, skin, gastro-intestinal system, liver, kidney, eyes, heart and cardiovascular system. Mr. Sears explained that he focuses on the cancer-causing pollutants.

The Navy is In the process of trying to clean up spills and deposits of volatile organic compounds found in the ground at Sites 9 and 11. During remediation of any site, there is the potential for releasing toxic chemicals into the air as a by-product. It appears that the Navy has gone to great lengths to control the emissions from this soil and groundwater cleanup effort, using fairly sophisticated equipment. The Navy measured pollutants emitted into the air at certain points during

cleanup. These emission measurements are called air toxic exposure assessments. The Navy used contractors to do an analysis of health risks arising from the cleanup.

Mr. Sears explained that his specific task was to review the exposure assessments to determine whether the analyses were done correctly, and if not, give his recommendation as to what should be done. The Navy provided him with the risk assessments prepared for Sites 9 and 11, as well as the supporting documentation. There was very little information relating to air emissions and resulting health risks.

Mr. Sears concluded that the inventory of toxic air pollutants were incomplete. The risk assessments done for the Navy used urban dispersion (plume grows quickly) coefficients, but the recommended approach, according to the San Diego Air Pollution Control District (APCD), is rural dispersion (restricted plume growth).

Mr. Sears then invited questions. Mrs. Kaupp asked why urban rather than rural dispersion standards were used. Mr. Sears explained that some consultants always choose urban, but that it is usually decided on a case-by-case basis. He said that rural should be used near the coast, since the ocean acts as a dampening mechanism and keeps pollutant concentrations higher. Based on studies done in Santa Barbara measuring plume growth, it's much less offshore, approximately 40% of rural. Plumes don't grow much at all in the California cold water environment. Mr. McCauley queried whether that applied in a prevailing westerly wind, and Mr. Sears said that urban dispersion would occur in a large area of tall buildings and turbulence-generating structures. The San Diego APCD had Dr. Kit Wagner do an analysis, and Mr. Sears referenced it in his report. Mr. Crawford commented that an article in the paper blamed most of the pollution in San Diego on transported smog from Los Angeles. Mr. Sears said that much of the air pollution is local. Mr. Mach asked how far inland would you go to cross from rural to urban. Mr. Sears said that it depended on land use, and that all of Santa Barbara and Ventura counties were rural. Mr. Mach also asked whether planes and helicopters have any effect on the air dispersion. Mr. Sears replied that even LAX, San Jose and Oakland airports were classified as rural. Ms. Hunter said that using urban dispersion would minimize the cancer risks.

Mr. Sears described Site 9 as being in the southwest portion of NAS North Island. It was a chemical waste disposal area contaminated with significant amounts of soil and groundwater pollution. Site 11, in the center portion of the base, is the site of an industrial and oily waste treatment plant and also has significant soil and groundwater pollution. The Navy was trying to clean up the underground contamination while minimizing air exposures. The risk assessment for Site 9 was based on source testing data, actual measurements of effluent stream coming out of the soil vapor treatment system. Testing was done on April 29, 1997. The carcinogenic/potentially carcinogenic air toxics emissions include vinyl chloride, 1,1 dichloroethene, methylene chloride, 1,1 dichloroethane, 1,2 dichloroethene, 1,1,1-trichloroethane, trichloroethene, and tetrachloroethene.

Cancer risk assessment is presented in terms of the probability for contracting cancer of a maximally exposed person from long term exposure to these carcinogens, expressed per million. There are two types of exposure - one for residents and one for workers. The exposure assessment prepared for the Navy found the residential excess cancer risk was about 0.5 per million and the worker risk about 1 per million. Any greater than 10 per million is considered significant; the standard was 1 per million prior to 1990, when the APCD and the State of California relaxed the standard. Mr. Sears found the screening risk assessments were fairly simple and conservative and only volatile organic compounds (VOCs) were included in the exposure assessment.

A different air consultant prepared the exposure analysis for Site 11, and there wasn't as much documentation. Pollutants detected included vinyl chloride, 1,1-dichloroethene, methylene chloride, 1,1-dichloroethane, 1,2-dichloroethane, trichloroethene, and perchloroethylene. The cancer risks were

reported as approximately 1 per million.

Mr. Sears performed a reanalysis on Site 9 as part of the review process, trying to use the same approach that the Navy's consultant used. Using the rural dispersion coefficient, he came up with a risk of 3.5 per million, 7 times higher. The worker risk was 1 per million using the screening risk assessment.

Reanalyzing Site 11, Mr. Sears again used rural dispersion coefficients and found the residential cancer risk was about 5.7 per million, and the worker cancer risk was about 3 per million. He then included 1995 emission test figures and found that the residential excess cancer risk was 14 per million, and the worker cancer risk at about 7 per million.

**Recommendations:** The Navy has done a very good job at identifying the contamination and a remarkably state-of-the-art effort at remediation. Mr. Sears found it inconsistent to use such simple risk assessments.

Mr. Sears made some recommendations, stating that his perspective was that of a former regulator. All past source test data at Sites 9 and 11 should be put in one place and quantified in a manner that would allow for new source data to be added. There should be a clear differentiation between influent and effluent emissions [which emissions are going into the cleanup system and which are coming out]. Emissions of inorganic compounds and other toxins such as dioxins and furans should be quantified. All pollutants being tested for in the exhaust systems of the treatment systems should be included in future exposure assessments. Emission calculations should be clearly presented, perhaps on a spreadsheet and available to the RAB in electronic form. A more refined HRA should be prepared, looking at all emissions and combining both sites into one exposure analysis and using a more refined air dispersion model such as the ISC3 [Industrial Source Complex Short Term version 3] and including actual meteorological data. If the HRA for these sites is redone, it should take place in a timely manner - no more than a few months after emission data is available. It should include toxicity data for all emitted pollutants.

**Questions and Comments:** In response to a question by Mrs. Kaupp, Mr. Sears stated that exposure assessments should be facility-wide, looking at the total "stationary source facility emissions". Mr. Hinkley commented that the water being pumped into the ocean from the country club groundwater has many of the toxins Mr. Sears mentioned. Mr. Sears responded that there would appear to be other sources of emissions. Ms. Williams asked if there are standard methods for measuring fugitive dusts and aerosols and Mr. Sears described the process for developing a test. Ms. Field asked whether it is appropriate to add the two cancer risk figures together. Mr. Sears said he did not know if it would be entirely appropriate, but that it is not a bad assumption for screening analysis. Ms. Field stated that would make the risk above 10 per million and Mr. Sears concurred. She then inquired why the worker risk was substantially lower. Mr. Sears explained that the exposure is considered to be 8 hours per day, 5 days per week, 48 weeks per year. This discounts the risk by 85% when compared to an entire lifetime. In the case of Site 9, a resident would be someone living within 2.4 kilometers, which was the closest residence. The distance is 1.3 kilometers for Site 11. If the Navy were to do a more refined HRA, Mr. Sears would recommend looking at hundreds, if not thousands, of points around Coronado and even the City of San Diego to see what the risks were over a wider area.

Ms. Rivera questioned Mr. Sears about use of the ISC3 model and meteorological data. Mr. Sears said that peak one-hour exposures would be about the same as the screening model. Mr. Hinkley asked when the data was collected, and Mr. Sears replied that for Site 9 it was during 1997, although he also used data from October 1995. Mr. Mach inquired whether Mr. Sears would still include

dioxins in his HRA calculations, given that the treatment system being used should not create dioxins, and also mentioned that all areas with emissions are either paved or covered with liner material. Mr. Sears responded that there needs to be a detailed effort to verify if these measures prevent emissions. He would not expect to see dioxins in a non-combustion system. Mr. Abbasi asked whether generation of dioxins wasn't temperature dependent. Mr. Sears agreed, and added that it is also dependent on the input stream.

Mr. Pound asked about the standards Mr. Sears used for residential assessment. Mr. Sears says the standard approach for cancer risk assessment is 70 years for both emissions and residency; for non-cancer health effects it's a year or less for chronic and one hour for acute. Mrs. Kaupp wondered if Mr. Sears would be comfortable if his wife were pregnant and living in this community. Mr. Sears sensed that there is probably greater risk from normal airport and base activities. Mr. Moser stated that there might be a lot of other more pedestrian activity contributing to hazardous waste dump sites, and thanked Mr. Sears for reinterpreting the data using rural model for air dispersion. Ms. Walters asked if it wasn't the responsibility of the San Diego APCD to determine whether the standard was urban or rural. Mr. Sears replied that while he had not seen the APCD's comments on HRA's, the APCD used and recommended the rural standard in other instances. Ms. Walters mentioned background cancer risk from automobile exhaust at a rate of 300 per million. Mr. Sears concurred, saying that the HRA focuses on excess cancer risk, the risk above everything else you are exposed to. Most urban areas in California have a background cancer risk from automobile traffic of 500 to 1000 per million. The statistics in the United States are from 1 in 4 to 1 in 3 for contracting cancer during a lifetime.

Mr. Magee and the RAB thanked Mr. Sears. Mr. Magee mentioned that anyone who wants a copy of the report should call him at 545-2709. Ms. Marron said that all RAB members should receive the consultant's report in the future. Ms. Hunter suggested that there be a wrap-up discussion at next month's RAB.

Mr. Mach said that there is additional data that the Navy prepared in response to Mr. Sear's report. In addition, APCD performed a screening analysis for Site 11 showing no significant risk which will be provided to Mr. Sears. Ms. Hunter thought that the contract was now over, but Mr. Collins informed the RAB that the contract calls for the consultant to respond to the comments raised at the presentation as well as the written questions given him by the Navy. Ms. Hunter requested more time for comments, and Mr. Collins suggested that RAB members give their written comments to him and they will be forwarded to Mr. Sears. Mr. Sears added that he has 4 hours to respond to prepare a written response to tonight's RAB meeting comments. He said that he probably spent twice as many hours on this from what the contract called for. Mr. Kaupp suggested forming a subcommittee to prepare questions for the consultant. Mr. Collins said that this information was valuable for future remediation projects, that there are some good guidelines and ideas. Ms. Hunter requested that in the future there be no other major agenda items during a RABTAC presentation. Mr. Magee agreed and said that given the consensus, we will continue with public comments and questions and postpone the Site 10 presentation for another meeting.

Mrs. Kaupp asked if HRA's had been done on all the cleanup sites. Mr. Collins said that an HRA was done for the PCB cleanup on Sites 4, 6 and 10, and also for Sites 9 and 11. Those are the only major removals. No HRA was performed for the emergency removal or the small landfill where the little concrete wall was erected. Mrs. Kaupp inquired of the Navy whether they thought the consultant's input was worthwhile, and would they use the consultant again. Mr. Collins said that there are different opinions, and both have merit. He thought it curious that the Air Board did not suggest or require more complex testing, and thought that they did okay. Mr. Kaupp objected, saying that Mr. Sears presented a well written and well-documented report and that the Navy should use it professionally and that there should not be any argument on the air dispersion coefficient. Mr. Kaupp challenged the questions the Navy came up with, and said that it appeared that the Navy's contractors shorted them a little bit. Mr. Mach said that models change, and that it is not common

practice to ask a contractor to rerun a new model because the model changes. The Navy thinks the contractors did a good job. They understand and appreciate Mr. Sears' comments and will use them in future assessments, and will continue to consult the APCD on these issues. But it is unfair to say that the Navy did not get their money's worth from their contractors, given the resources available at the time. Mr. Kaupp responded that, in his professional opinion, the report did not document well enough what the emissions were or describe the model or output.

Ms. Hunter suggested that we see if there are any more questions for Mr. Sears, given the time constraints. She recommended a book by Cassandra Steingraber called *Living Downstream*, which she considers a "user-friendly" book about pollutants and their relationship to cancer.

Mr. Abbasi asked Mr. Sears whether he thought the 70-year assumption wasn't too conservative. Mr. Sears said some assumptions are conservative, others are not, but you must assume some value and that is the assumption used by the State of California. Mrs. Dyer asked whether the Navy shouldn't adhere to some of the things Mr. Sears spoke of, whether they would check on other compounds that have not been reported on. Mr. Collins said they were going to check on the chromium, and Mrs. Dyer asked if that was all. She was told it was. Mr. Mach amplified saying that chromium is the only compound that the Navy knows could get sucked into the vapors through the SVE system. The likelihood of anything else getting through the carbon adsorption system is essentially zero. The liners used on Areas 1 and 3 of Site 9 reduce the airborne emissions, and Site 11 is paved or has plastic liner plus that site is complete. Rerunning the analyses does not seem appropriate or cost effective at this time. Ms. Hunter inquired if thermal treatment is being used, and Mr. Magee informed her that Thermatrix would be used on Site 9. Mr. Mach said that if dioxin were found, it would be added to the assessment. Mr. McCauley asked about completion dates, and Mr. Mach replied that Site 11 was completed in March 1997, and Site 9 should be complete in March 1998.

Agenda items for the next RAB meeting include a follow-up discussion on HRA, RAB outreach and possibly the Site 1 storm drain outfall study consultant's report.

The next RAB meeting will be Thursday, February 19<sup>th</sup> at 6:30 p.m. Dates were picked for future RAB meetings, so consultants can be scheduled. These are Wednesday, March 18<sup>th</sup>, Thursday, April 16<sup>th</sup>, Wednesday May 13<sup>th</sup> and Thursday, June 18<sup>th</sup>.

The meeting was adjourned at 8:30 p.m.